



DECUS

PROGRAM LIBRARY

DECUS NO.	8-256
TITLE	BINARY TO RIM FORMAT CONVERTER
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SOURCE LANGUAGE	PALD

21330

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BINARY TO RIM FORMAT CONVERTER

DECUS Program Library Write-up

DECUS No. 8-256

1. ABSTRACT

In some cases it may be necessary to use memory locations between 7600 and 7755. The user program overlays the binary loader, and assembler output is in binary format. The Binary to RIM Converter takes as input the assembled tape and produces a copy which can be loaded with the RIM loader.

2. REQUIREMENTS

2.1 Storage

The program uses 78 memory locations, from 200 to 315.

2.2 Equipment

A basic PDP-8 with a high-speed reader and punch.

3. LOADING PROCEDURE

Use binary loader.

4. USING THE PROGRAM

Put the binary tape to be converted into the high-speed reader, starting on the 200 code leader. Turn high-speed punch on, and start program at 200.

The program will punch leader, the program converted to RIM format, and trailer; then halt.

5. DETAILS OF OPERATION

The program first checks for leader and punches it on the output tape. Anything with a channel 8 punch will be taken as leader and output as a 200 (octal) code. If a "field setting" is present it will thus be converted to leader.

Then groups of 3 characters are read; if the third one is a trailer character (channel 8 punched), conversion of the binary input tape is complete and the program punches 100 (octal) characters of trailer, then stops. The check-sum on the binary tape is ignored.

Otherwise, if the first character of the 3 has a channel 7 punch, a location containing the current address is loaded with the 2 characters of origin setting. If the first character is not an origin setting, then it and the next character are copied onto the output tape after the 2 address characters, disassembled from the current address word (CA on the listing).

6. LISTING OF BINARY TO RIM FORMAT CONVERTER

001			*200	
002	0200	6014		RFC
003	0201	6026		PLS
004	0202	7200	START,	CLA
005	0203	1314		TAD C200
006	0204	4262		JMS OUT
007	0205	4302		JMS INPUT
008	0206	3310		DCA STORE
009	0207	1310		TAD STORE
	0210	7006		
010	0211	7006		RTL; RTL
011	0212	7510		SPA
012	0213	5202		JMP START
013	0214	7200	LOOP,	CLA
014	0215	1310		TAD STORE
015	0216	3311		DCA CHAR1
016	0217	4302		JMS INPUT
017	0220	3312		DCA CHAR2
018	0221	4302		JMS INPUT
019	0222	3310		DCA STORE
020	0223	1310		TAD STORE
	0224	7006		
021	0225	7006		RTL; RTL
022	0226	7710		SPA CLA
023	0227	5270		JMP END
024	0230	1311		TAD CHAR1
	0231	7006		
	0232	7006		
025	0233	7006		RTL; RTL; RTL
026	0234	7420		SNL
027	0235	5241		JMP PUNCH
028	0236	1312		TAD CHAR2
029	0237	3313		DCA CA
030	0240	5214		JMP LOOP
031	0241	7320	PUNCH,	CLA CLL CML
032	0242	1313		TAD CA
033	0243	0315		AND P7700
	0244	7012		
	0245	7012		
034	0246	7012		RTR; RTR; RTR
035	0247	4262		JMS OUT
036	0250	1313		TAD CA
037	0251	0316		AND P77
038	0252	4262		JMS OUT
039	0253	1311		TAD CHAR1
040	0254	4262		JMS OUT

041	0255	1312		TAD CHAR2
042	0256	4262		JMS OUT
043	0257	2313		ISZ CA
044	0260	5214		JMP LOOP
045	0261	5214		JMP LOOP
046	0262	0000	OUT,	0
047	0263	6021		PSF
048	0264	5263		JMP .-1
049	0265	6026		PLS
050	0266	7200		CLA
051	0267	5662		JMP I OUT
052	0270	7200	END,	CLA
053	0271	1315		TAD P7700
054	0272	3310		DCA STORE
055	0273	1314		TAD C200
056	0274	6021		PSF
057	0275	5274		JMP .-1
058	0276	6026		PLS
059	0277	2310		ISZ STORE
060	0300	5274		JMP .-4
061	0301	7402		HLT
062	0302	0000	INPUT,	0
063	0303	7300		CLA CLL
064	0304	6011		RSF
065	0305	5304		JMP .-1
066	0306	6016		RRB RFC
067	0307	5702		JMP I INPUT
068	0310	0000	STORE,	0
069	0311	0000	CHAR1,	0
070	0312	0000	CHAR2,	0
071	0313	0000	CA,	0
072	0314	0200	C200,	200
073	0315	7700	P7700,	7700
074	0316	0077	P77,	77

CA	0313
CHAR1	0311
CHAR2	0312
C200	0314
END	0270
INPUT	0302
LOOP	0214
OUT	0262
PUNCH	0241
P77	0316
P7700	0315
START	0202
STORE	0310